

REMARKS

Claims 1-6, 8-30, 52 and 53 were previously pending in this application. Claims 2, 3, and 10 are currently amended. Support for the amendment to claim 2 can be found in paragraph [0039] and FIG. 1 of the specification as filed. Support for the amendment to claim 3 can be found in paragraph [0068] of the specification as filed. Support for the amendment to claim 10 can be found in claims 1, 9, and 10 as previously presented. No claims are currently added or cancelled. As a result, claims 1-6, 8-30, 52 and 53 are pending for examination with claims 1 and 10 being independent claims. No new matter has been added.

Allowable Subject Matter

Applicant notes that claims 10-13 and 52 were objected to in the Office Action as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and intervening claims. Claim 10 has been amended as suggested to be in independent format. Dependent claims 11-13 and 52 all depend from independent claim 10, either directly or indirectly.

Accordingly, withdrawal of the objection and allowance of independent claim 10 and dependent claims 11-13 and 52 is respectfully requested.

Summary of Telephonic Interview with Examiner Cavallari

Applicant would like to thank Examiner Cavallari for the telephonic interview on Tuesday, September 23, 2008. During the interview, the Objection to the Drawings presented in the Office Action mailed August 18, 2008 was discussed. Applicant had submitted a replacement drawing, amendments to the specification, and arguments in a Response submitted April 7, 2008 which addressed a similar objection presented in an Office Action mailed November 5, 2007. In light of the previously submitted replacement drawing, the previously submitted amendments to the specification, an explanation of the Figures provided by Applicant during the interview, and an agreement by Applicant to clarify the relationship between the "external system" of claim 1 and the "Uninterruptable Power Supply" of claim 2 by an amendment to claim 2, the Examiner agreed to withdraw the objection to the drawings.

Rejections Under 35 U.S.C. § 112

The Office Action rejected dependent claim 2 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In accordance with an agreement reached between Applicant and the Examiner in a telephonic interview held on September 23, 2008, and to advance prosecution, dependent claim 2 has been amended to further clarify the relationship between the “external system” of claim 1 and the “Uninterruptable Power Supply” of claim 2.

Accordingly, withdrawal of the rejection under 35 U.S.C. § 112 and allowance of dependent claim 2 is respectfully requested.

Rejections Under 35 U.S.C. § 103

The Office Action rejected claims 1, 2, 4-6, 8, 22, 24, 25, 27-30 under 35 U.S.C. § 103(a) as being unpatentable over Edington et al., U.S. Patent App. Pub. No. 2005/0001589 (hereinafter “Edington”) in view of Blair et al., U.S. Patent No. 6,700,351 (hereinafter “Blair”). Applicant respectfully traverses the rejection as outlined below.

The Disclosure of Edington

Edington is directed generally to a system and method for authenticating a smart battery (Edington at paragraph [0007].) Edington discloses a smart battery 110 having smart electronics 112 to control the operating condition of the battery 110 and monitor various battery variables such as voltage, current, temperature, and charge level, and at least one rechargeable cell 116. (Edington at paragraphs [0021] and [0027] and FIG. 1.) The smart electronics 112 is electrically coupled to a battery charge line 152 and a control line 172 for interfacing with external devices such as a charger device 120 and a controller 170 respectively. (Edington at paragraph [0027].) During a charge operating condition, the smart electronics 112 is operable to receive a charge from the charger 120 via the charge line 152 and transfer the charge to the rechargeable cell 116 when required. (Edington at paragraph [0028].) Smart battery 100 may receive an encrypted string from controller 170 and respond to controller 170 with a second encrypted string to authenticate the battery. If the smart battery is identified to be counterfeit, then the charging operation for the battery is disabled. (Edington at paragraph [0033]).

Nowhere does Edington disclose that the smart electronics 112 (referred to in the Office Action as the monitor) communicates with the external system by actively suspending current of received power provided to the monitor by the external system as recited in independent claim 1.

The Disclosure of Blair

Blair is directed to a UPS system that has a modular design (Blair Abstract). The UPS system includes a battery module which includes a controller that monitors the state of the battery module. (Blair at Col. 11, line 1 – Col. 12, line 44.) The battery module communicates with the UPS system using a conventional controller area network (CAN) message passed from the battery monitor controller to the system via a CAN interface bus. (Blair at Col. 11, lines 38-44, and Col. 8, lines 18-25.)

The UPS system of Blair further includes battery module firmware which records in EEPROM total discharge cycles, module hardware compatibility, total time on battery, total watt-hours delivered on battery, and total counts of over temperature during charging. (Blair at Col. 9, lines 25-37.)

Blair fails to disclose a battery comprising a “monitor . . . wherein the monitor communicates with [an] external system by actively suspending current of received power provided to the monitor by the external system,” as recited in independent claim 1. Blair communicates between a CAN and other system components using a conventional CAN interface. Blair does not teach or suggest a monitor that communicates by interrupting current of received power as recited in independent claim 1. Rather, Blair uses conventional bus communication techniques for communicating CAN messages between system components.

Claims 1, 2, 4-6, 8, 22, 23, 25, 27-30, and 53 patentably distinguish over Edington in view of Blair

There is no *prima facie* case of obviousness of independent claim 1 or dependent claims 2, 4-6, 8, 22, 23, 25, 27-30, and 53 over Edington in view of Blair because no combination of Edington with Blair could teach all the elements of independent claim 1 or the claims which depend therefrom.

As stated above, nowhere does Edington disclose a monitor which communicates with an external system by actively suspending current of received power provided to the monitor by the

external system, as recited in independent claim 1. Rather, the only method of communication between a battery and any external system disclosed in Edington is that a smart battery may communicate with an external system (i.e. controller 170) by communicating a random numeric string (“The random string, which has been recovered by the smart battery 110, is transferred to the controller 170 for authentication.” Edington at paragraph [0030]; “In step 360, the encrypted second random string is transferred from the smart battery 110 to the controller 170.” Edington at paragraph [0033].) Communicating a random string of numbers to a controller is a very different manner of communication than actively suspending current of received power provided to a monitor by an external system, and cannot render a method of communication comprising actively suspending current of received power provided to a monitor by an external system obvious.

The charging operation of Edington may be disabled in response to the communicated random string being “incorrect”. (Edington at paragraph [0033].) However, it is the controller 170 that compares the random string received by the battery 110 with a second random string to authenticate the battery. If the battery is not authenticated by the controller 170, then the battery is identified as counterfeit and the charging operation disabled. Thus, the charging operation may be disabled by the controller, not actively suspended by the battery or by any alleged monitor. If anything, a disabling of the charging operation would be a result of the communication between the battery and the controller. The disabling of the charging operation cannot comprise the communication itself. Thus, Edington cannot disclose, teach, or suggest a battery comprising a monitor which communicates with an external system by actively suspending current of received power provided to the monitor by the external system, as recited in independent claim 1.

As discussed above, Blair also fails to disclose, teach, or suggest a battery comprising a monitor which communicates with an external system by actively suspending power of received power provided to the monitor by the external system as well. Thus, no combination of Edington with Blair could disclose this element of independent claim 1. There can be no *prima facie* case of obviousness of independent claim 1 over Edington in view of Blair because no combination of the references can disclose, teach, or suggest all elements recited in independent claim 1.

Accordingly, reconsideration and withdrawal of the rejection of independent claim 1 under 35 U.S.C. § 103 over Edington in view of Blair is respectfully requested.

Dependent claims 2, 4-6, 8, 22, 23, 25, 27-30, and 53 depend either directly or indirectly from independent claim 1, and are patentable for at least the same reasons as independent claim 1. Accordingly, reconsideration and withdrawal of the rejection of dependent claims 2, 4-6, 8, 22, 23, 25, 27-30, and 53 under 35 U.S.C. § 103 over Edington in view of Blair is respectfully requested.

The Office Action rejected dependent claim 3 under 35 U.S.C. § 103(a) as being unpatentable over Edington in view of Blair and Mengelt et al., U.S. Patent No. 5,579,197 (hereinafter “Mengelt”), dependent claim 9 under 35 U.S.C. § 103(a) as being unpatentable over Edington in view of Blair and Wedelrup et al., U.S. Patent No. 6,584,329 (hereinafter “Wedelrup”), dependent claims 14, 15, 20, 21, 23, and 26 under 35 U.S.C. § 103(a) as being unpatentable over Edington in view of Blair and Downs et al., U.S. Patent Pub. No. 2001/0009361 (hereinafter “Downs”), and dependent claims 16-19 under 35 U.S.C. § 103(a) as being unpatentable over Edington in view of Blair and Bohne et al., U.S. Patent Pub. No. 2004/0160210 (hereinafter “Bohne”). Applicant respectfully traverses these rejections as outlined below.

The Disclosure of Mengelt

Mengelt is directed generally to a backup power system. (Mengelt at Col. 1, lines 15-17.) The backup power system has a controller 50 which, in the event that a fault has occurred in the power supplied from the main AC power system 20, issues a control signal to control a relay coil 51 to open switches 48 and 49, while simultaneously applying control signals on the lines 55 to inverter 56 (connected to a battery 64) to turn on the inverter to provide AC power to the primary 58 of the transformer 59.

Mengelt fails to disclose a battery comprising a “monitor . . . wherein the monitor communicates with [an] external system by actively suspending current of received power provided to the monitor by the external system,” as recited in independent claim 1.

The Disclosure of Wendelrup

Wendelrup is directed to a method enabling digital, serial communication over an interface between an electronic device and a battery attached thereto, said digital, serial communication comprising transmission of bytes consisting of a number of bits, each bit being defined by one of a high level and a low level, wherein a leading bit of each byte is of a first one of said high and low levels. (Wendelrup at Col. 1, lines 5-11.) The electronic device includes a transceiver 108 that may be a universal asynchronous receiver. (Wendelrup at Col. 3, lines 43-45.)

Nowhere does Wendelrup disclose, teach, or suggest a battery comprising a “monitor . . . wherein the monitor communicates with [an] external system by actively suspending current of received power provided to the monitor by the external system.”

The Disclosure of Downs

Downs is directed to a method for monitoring a rechargeable battery (Abstract). Downs discloses a battery pack 100 that monitors a battery using a battery monitoring circuit 102. (Downs at FIG. 1 and Paragraph [0017].) The battery monitoring circuitry includes a temperature sensor 114, temperature register 130, a battery voltage register 132, a battery current register 134, a clock register 136, a disconnect registers 138, a non-volatile memory 140, an integrated current accumulator 142, a charge current accumulator 144, and a discharge current accumulator 146, as well as a resistor, the voltage across which reflects the current into or out of battery cells 154. (Downs at Paragraphs [0014] and [0021].)

Nowhere does Downs disclose, teach, or suggest a battery comprising a “monitor . . . wherein the monitor communicates with [an] external system by actively suspending current of received power provided to the monitor by the external system.”

The Disclosure of Bohne

Bohne is directed to reconditioning rechargeable batteries, and more specifically to an adaptor for a non-smart battery that facilitates reconditioning in a smart charger. (Bohne at Paragraph [0002].) Bohne discloses a smart battery 102 which contains a memory device 109 that holds battery information, including serial number, type of cell, charging instructions, data

parameters, charge usage histogram, date of manufacture, first date of use, and similar information. (Bohne at Paragraph [0019].)

Nowhere does Bohne disclose, teach, or suggest a battery comprising a “monitor . . . wherein the monitor communicates with [an] external system by actively suspending current of received power provided to the monitor by the external system.”

Claims 3, 9, 14, 15, 20, 21, 23, 26, and 16-19 patentably distinguish over Edington in view of Blair and in view of Mengelt, over Edington in view of Blair and in view of Wendelrup, over Edington in view of Blair and in view of Downs, and over Edington in view of Blair and in view of Bohne, respectively.

As discussed above, none of Edington, Blair, Mengelt, Wendelrup, Downs, or Bohne disclose, teach, or suggest a battery comprising a “monitor . . . wherein the monitor communicates with [an] external system by actively suspending current of received power provided to the monitor by the external system,” as recited in independent claim 1. Thus, independent claim 1, and dependent claims 3, 9, 14, 15, 20, 21, 23, 26, and 16-19, each of which depends either directly or indirectly therefrom, are patentable over any combination of Edington, Blair, and Mengelt, Edington, Blair, and Wendelrup, Edington, Blair, and Downs, or Edington, Blair, and Bohne because no combination of these references could disclose, teach, or suggest each and every element of independent claim 1.

Further, with regard to dependent claim 3, nowhere in any of Edington, Blair, or Mengelt is there disclosed, taught, or suggested a monitor further comprising a processor, the processor including a circuit to reset the processor if the received power is insufficient, as recited in dependent claim 3.

Accordingly, reconsideration and withdrawal of the rejection of dependent claim 3, 9, 14, 15, 20, 21, 23, 26, and 16-19 under 35 U.S.C. § 103 over the cited references is respectfully requested.

CONCLUSION

In view of the foregoing amendments and remarks, reconsideration is respectfully requested. This application should now be in condition for allowance; a notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50/2762.

Respectfully submitted,
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Docket No.: A2000-700019

Date: November 5, 2008

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